

“SLOODLE” SIMULATION LINKED OBJECT ORIENTED DYNAMIC LEARNING ENVIRONMENT

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Abstract

SLOODLE is an Open Source project, the aim of which is to integrate the learning support and management features of web-based LMS (Learning Management Systems, a.k.a. VLE or Virtual Learning Environment) with rich interactive game-technology based 3D Multi-User Virtual Environments (MUVE). Currently all SLOODLE development is based on integrating Moodle® and Second Life®. the system provides a range of tools for supporting learning and teaching to the immersive virtual world.

Sloodle was born in 2006 with the paper of the founders Jeremy Kemp, eCampus, San Jose State University (SL: Jeremy Kabumpo) and Daniel Livingstone, School of Computing University of Paisley(SL: Buddy Sprocket).

I created sites, translations and support resources to spread, making it easy and create a landmark for Italian teachers and students and, generally speaking, for anyone involved in training who would integrate their programs with experimental methods in the metaverse, 3D virtual worlds. Teaching and learning SL skills, science and physics could have advantages and effective results.

1. Who I am

My name is Elisa Rubino, graduated in physics at the University of Genoa and actually I'm Professor in electronics and telecommunication in High school, in an IT IS, Industrial technical institute of Genoa, Italy.

I'm here today to tell you about Sloodle and to make you know it and to diffuse it like tool bridge between the virtual platforms of learning management system LMS and virtual environment. I have been dedicating myself for more than two years to explore the potentialities of the virtual environment of SecondLife, a user content generated world and due to the vision of the physicist Philip Rosedale in the laboratories of the Linden Lab in S. Francisco, USA.

Mainly I have been exploring the experimentations and realizations in the field of education Universities and organizations, that have given life to experimentations and courses in the virtual islands in SL., that are numerous. The SL world has its own language and we all introduce ourselves with the Real Life name followed by "a.k.a" (also known as) and SecondLife name, for example I am E.R a.k.a. Eleonora Porta in S.L. Let's go on with Sloodle, now.

Many of you know the learning platforms like VLE or CMS or LMS; anyway only a few know with direct experience SecondLife and so I will spend some word speaking about the resources, the advantages and disadvantages and the potentialities in the didactic use of the MUVE.

2. What MUVEs are

MUVE is an acronym that digitally means "Multi User Virtual Environment", an environment in 3D where more users can be at the same time present and where they can interact. This means that it is possible to organize classes, courses, conferences, projects with students, teacher, experts from all the world.

These environments are integrated with web and web 2.0 and provide communication audio video and synchronous and asynchronous tools with possibility of streaming, of presentations with slide, images, pdf directly inworld. We could find all of this also in a videoconference or in online courses on the web but the presence inworld has numerous advantages in comparison.

First the customers are represented by avatar and the presence nearly becomes physical, the customer is immersed in the world and becomes part of it, interacting with the others avatar and the surrounding objects.

Users can generate contents in real time and build, cities, environments, settings, landscapes and any object in an easy, cheap and extremely flexible way also through the animation attributed to the objects by a language of programming LSL, Linden Scripting Language that allows the objects to communicate, to act, to work and to simulate behaviour.

The simulation of the behavior of objects is fundamental for the experienced learning; students can get direct experience of the behavior and evolving of actions, for example can enter inside an optic fiber, an enormous computer and explore it in 3 dimensions.

They can build and make objects by themselves. They can play role games becoming anybody: historical personages, scientists, physicists and they can reconstruct the historical acclimatization, can go on the moon and stay on the lunar module, they can improve their English looking for contacts with people.

These examples add to other more classic methodologies as presentation, meeting and lessons *in world* (in the virtual world), always with the enormous advantage of perceiving a nearly physical presence and interacting each others; determine an acceleration of learning process of Knowledge besides the undeniable one of being an attractive method for the students and probably the future environment for collaboration and international cooperation.

Teaching and learning in virtual worlds is not still, at least in Italy, a diffused method, and even though many Universities (Torino, Bergamo, Milano, Urbino, Cagliari, Teramo,...) have their lands on SL, a very few high or secondary schools (Indire-FOR) are trying to introduce students or colleagues, the future diffusers, to the MUVE, to school 3D, to OpenSim, to SecondLife.

3.What Sloodle is

This paper pays a special attention to teachers with a little or no experience of virtual worlds but and knowing LMS platforms and using them with their students.

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Since I discovered it I began to think it would be the bridge, the missing link in order to introduce my colleagues and students to virtual worlds and in order to begin to make them aware of the potentialities and future developments.

As a matter of fact our students were born with new technologies, video-games, mobile telephony, web 2.0, social network, video and images hosting sites and are more attracted and used to by these new learning approach than we teachers are.

I created sites, translations and support resources to spread, making it easy and I created a landmark for Italian teachers and students and, generally speaking, for anyone involved in training who would integrate their programs with experimental methods in the metaverse, 3D virtual worlds.

Teaching and learning SL skills, science and physics could have advantages and effective results.

SL + MOODLE = SLOODLE: what does it mean?

If you have already used moodle as students, or as teachers creators of course or as administrators and if you wished to introduce your students in virtual worlds which you have had personal experience, you are my ideal auditory; if you have only used SL without having an idea of what a LMS is, you will perhaps not be interested to use it but you could be interested in introducing students in virtual worlds in a controlled, and verifiable way with evaluation criteria and assessment. If you know neither one nor the other, this will be an occasion to get in touch with it. In the end a useful bibliography will be supplied for an independent and autonomous reference library. Before examining in details some of the devices and flying over on the pedagogical and methodological foundations as soon as pointed out in the first part it will be better to have an example, a scenario, a setting for learning and teachers.

4.Scenery

Andrew is a student in High school, enrolled to the last year of a technical institute and he is 18teen, he is not attracted by the study on the text books and nobody has never introduced it to the e-learning neither independent nor guided; for a long time he played with play station, now not more, but he spends the evening chatting and being annoying in net and sometime he continues to play to video-games, when the parents don't control, sometimes also online and to MMORPG (Massive (ly) Multiplayer Online Role-Playing Game), as he always made in childhood.

Francesca is a teacher of physics in a different school where Andrew studies, and has created in the site MOODLE of the institute a course for the learning in virtual worlds oriented to students like Andrea and to his teachers, like Charles, the English teacher.

First, he enrolled in the course as guest, then, attracted by some elements and encouraged by his teacher, he enrolled as student with Charles. He downloads the program from Internet and, after having created an account on SL it logs in and he is in the virtual land built for the school.

He still doesn't know how to move but he learns in a hurry with the releasable electronic guide, and with the basic course of Francesca and with his tutor Charles. The SL client has been translated in many languages, also Italian, making it more usable.

Charles was wondering, however, how to assign tasks to Andrew inworld, how to value it, how to be sure he has answered those quizzes by himself and how he could be able to make the presentation of the lesson on slides or in video at the same time with other students and teacher of many cities and countries. Here Sloodle is the fit tool.

First Francesca asks to the administrator of the site moodle on the server to insert a module plugin, then logs in SL and she materializes (rez) the necessary set and objects Sloodle: the registration booth, the presenter, the web-intercom, metagloss, drop-prim, picture gloss, the quiz-chair, award system and others.

Charles and Andrew are recorded now also inworld, and their SLname is linked to name in Moodle site. They read the news in moodle site, meeting dates, synchronous lessons, and inworld they make assignments, answer quizzes, participate to the lessons inworld, interact with other students.

Andrew is able to learning in funny way, he participates actively to the experiments, interact with teachers and students and could be teletransported in American, Asian, Australian, other European lands, where he could assist to simulations or create them himself; the learning occurs in an experiential way, "doing", expressing his own creativity and collaborating with his own teacher who can control the process, record it, value it and also certify it.

5.Sloodle Objects

The documentation available for Sloodle is subdivided in documentation for teachers and tutor, administrators and developers. The documentation available for Sloodle is subdivided in documentation for teachers and tutor, administrators and developers. The documentation available for Sloodle is subdivided in documentation for teachers and tutor, administrators and developers. I refer to tutors, I've translated it in Italian.

5.1 Set It is the object to rez (to materialize) on the virtual land in order to create a link with the web moodle site; that set is univocally connected to moodle. It is the set which will generate and materialize all the other objects that will be connected with an ID identification number to the course web.

5.2 Registration Booth Allows users in Second Life to link their avatar to their account on a Moodle site. (This process is also known as "avatar authentication" or "avatar registration". See [Registration and Enrolment](#) for more information). From SLOODLE 0.4 onwards, this will also enroll the user on the appropriate Moodle course, if they are not already enrolled.

5.3 Presenter The SLOODLE presenter is a tool for creating presentations (for lecture, seminar or self-paced tutorial use) in Second Life. The presenter avoids the requirement to upload images into Second Life and allows presentations to combine images, web-pages and videos by streaming the presentation content into Second Life using the media settings. Thus, each slide can be one of:

- a webpage
- an image
- a video (in Quicktime compatible format - e.g. mov or mp4)
- a youtube video
- a pdf file

As it uses the parcel media settings, the presenter must be owned by the land owner - or deeded to the land owning group where the land is group owned. Presentations can be viewed in Second Life and/or in Moodle itself. The presenter can be set to allow any avatar - or only the owner - to control the presentation using the forward and back buttons.

5.4 PrimDrop PrimDrop is a utility instructors can use so that Second Life students can submit assignments in Second Life to a Sloodle Website.

5.5 Quiz-chair Allows users to attempt a multiple-choice Moodle quiz from within Second Life, and receive visual feedback.

5.6 Webintercom¹ The Web Intercom connects the public text chat in Second Life to a chat room in Moodle. This allows chat to be shared between Second Life and Moodle, which is useful if some people do not have access to Second Life. (A good example of this is the Teen Grid, where some users may not have clearance -- an authorized user could setup a Web Intercom while others chat from Moodle). The Moodle chat is also logged, which is useful for keeping a record of in-world chat sessions. In order to view archived chat, users can simply go to their Moodle course page, click on the Moodle Chat activity, and select "View past Sessions".

5.7 Metagloss The Metagloss is a tool in the Second Life 'metaverse', allowing access to Moodle 'glossaries'. Hence, "Metagloss". The Student asks the definition inworld asking in public chat after /def and the definitions, introduced in the glossary on moodle, will appear in world public chat.

5.8 Picture Gloss The Sloodle Picture Gloss, provides an in-world glossary where users can search via chat commands. When a Glossary entry is found, the texture stored for that glossary entry is displayed on a Prim in Second Life. Users to query a MOODLE Glossary by typing "/pix search term" The Picture will then searches the Moodle glossary for special formatted Glossary entries which have Texture UUID's and scale dimensions stored. If a texture UUID has been stored as the Glossary terms definition, then the Picture Gloss in Second Life will be scaled to the appropriate dimension and it's textures changed to the Texture UUID stored in the Glossary entry.

Other objects are under consideration like a board in order to visualize the scores while the students are executing the quiz. Toolbar and free mail that allow students to send a short

¹ Note: 'WebIntercom' used to be known as the 'chat cast' or 'chat logger'.

message that will figure like post on the blog of the site moodle. Here are all the objects:
http://slisweb.sjsu.edu/sl/index.php/Quickstart_Sloodle_1.0

6. Getting Started with Sloodle (Sloodle.org source reference)

6.1 Sloodle Online – <http://www.sloodle.org>

Interested and want to know more? Visit the Sloodle project homepage. Here you'll find forums for users and developers (all welcome!) as well as Italian language forums. The forums are active, and most requests for help are answered within 24 hours, sometimes significantly less. Via the homepage you'll also find links to our Wiki (with masses of documentation for educators, students and Moodle administrators) and a number of community produced tutorial videos which can walk you through the process of downloading, installing and getting started with the Sloodle tools.

6.2 Sloodle Inworld

You can also get support for Sloodle inworld – with regular weekly developer meetings and weekly 'Sloodle 101' classes open to anyone wanting to learn more. Soon we'll be relocating to a new sim dedicated to Sloodle, and to supporting Sloodle users – just use the "Teleport Now" link on the homepage to find the classes.

Sloodle 101 – Wednesdays, 2pm 'Second Life Time'

Sloodle Developer Meeting – Tuesdays, 2pm 'Second Life Time'

6.3 About Moodle

The Sloodle homepage has been created using Moodle, the open-source learning and content management system. You can learn more about Moodle at <http://www.moodle.org/>

Moodle is used daily by hundreds of thousands of students worldwide, and is the virtual learning environment of choice for many hundreds of schools, colleges, universities and businesses worldwide.

Sitografia / References

Official site Sloodle www.sloodle.org

Official site Moodle www.moodle.org

Official site Second Life www.secondlife.com

Quickstart with Sloodle 1.0 http://slisweb.sjsu.edu/sl/index.php/Quickstart_Sloodle_1.0

WhitePaper foundation <http://www.sloodle.org/moodle/whitepaper.pdf>

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Case-study <http://www.sloodle.org/blog/?p=13>

Slide on slideshare <http://www.slideshare.net/elisarubino/sloodle-che-cos>

Slide on Youtube <http://www.youtube.com/watch?v=yakNYjIB7xs>

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